

AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior listings and versions of claims in the application.

CLAIMS:

1-100 (canceled)

101. (currently amended) A set of reagents, comprising:

a) a thermostable 5' nuclease lacking synthetic activity, wherein said thermostable 5' nuclease functions to cleave a nucleic acid cleavage structure at a temperature of at least 55°C;

b) a target nucleic acid comprising a first region and a second region, wherein said second region is contiguous to and downstream of said first region;

~~b~~c) a first oligonucleotide comprising:

i) a charged adduct, and

ii) a portion completely complementary to ~~[[a]]~~ the entire length of said first region of ~~[[a]]~~ said target nucleic acid;

and

~~ed~~) a second oligonucleotide comprising a 3' portion and a 5' portion, said 5' portion completely complementary to the entire length of ~~[[a]]~~ said second region of said target nucleic acid ~~downstream of and contiguous to said first region.~~

102-103 (canceled)

104. (previously presented) The set of reagents of Claim 101, wherein said set of reagents further comprises a solid support.

105. (previously presented) The set of reagents of Claim 104, wherein said first oligonucleotide is attached to said solid support.

106. (previously presented) The set of reagents of Claim 104, wherein said second oligonucleotide is attached to said solid support.

107-110. (canceled)

111. (previously presented) The set of reagents of Claim 101 wherein said thermostable 5' nuclease comprises an amino acid sequence, wherein a portion of the amino acid sequence of said 5' nuclease is homologous to a portion of an amino acid sequence of a thermostable DNA polymerase derived from a thermophilic organism.

112. (previously presented) The set of reagents of Claim 101, further comprising a buffer solution.

113-115. (canceled)

116. (previously presented) The set of reagents of Claim 101, wherein said charged adduct comprises a linker.

117. (previously presented) The set of reagents of Claim 101, wherein said charged adduct comprises a detectable molecule.

118. (previously presented) The set of reagents of Claim 117, wherein said detectable molecule is Cy3, Cy5, a fluorescent dye, ethidium bromide, (1,3-propanediamino)-propidium, (diethylenetriamino)-propidium, thiazole orange, (N-N'-tetramethyl-1,2-ethanediamino)-propyl thiazole orange, (N-N'-tetramethyl-1,3-propanediamino)-propyl thiazole orange, TOTAB, TOTO, EthD, TOED1, TOED2, or FED.

119. (previously presented) The set of reagents of Claim 117, wherein said detectable molecule comprises fluorescein.

120. (previously presented) The set of reagents of Claim 101, wherein said charged adduct comprises at least one amino acid.

121. (previously presented) The set of reagents of Claim 120, wherein said at least one amino acid is lysine, arginine, aspartate, or glutamate.

122. (previously presented) The set of reagents of Claim 101, wherein said charged adduct comprises at least one amino-modified base.

123. (previously presented) The set of reagents of Claim 101, wherein said charged adduct is located at the 5' end of said first oligonucleotide.

124. (previously presented) The set of reagents of Claim 101, wherein said first oligonucleotide comprises an uncleavable region.

125. (previously presented) The set of reagents of Claim 124, wherein said charged adduct is attached to said uncleavable region of said first oligonucleotide.